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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/274,935	03/23/1999	KATHLEEN L. COVERT	EN997064	9143

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EXAMINER

MARKOFF, ALEXANDER

ART UNIT PAPER NUMBER

1746

DATE MAILED: 02/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/274,935

Applicant(s)

COVERT ET AL.

Examiner

Alexander Markoff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The rejection of claims 18 and 19 made in the previous Office action under 35USC 112(2) is withdrawn in view of the amendment.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. The rejection of claims 1, 2, 5, 6, 8, 9 and 13 made in the previous Office action under 35 USC 102(b) as anticipated by JP 5-148,658 is maintained for the reasons of record.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. The rejection of claims 14-20 made in the previous Office action under 35 USC 103 over JP 5-148,658 in view of Kuhankis et al and Vuts is maintained for the reasons of record.
6. The rejection of claims 10-12 made in the previous Office action under 35USC103 over JP 5-148,658 in view of Arabnic is maintained for the reasons of record.

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7. Claims 3, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 5-148,658 in view of Tsubai et al (4,238,279), Larson et al (US Patent No 5,550,006) and Hong et al (US Patent No 5,885,476).

The JP document teaches the claimed except for recitation of the specific phosphate salts.

Tsubai et al teach that what is industry meant under a general disclosure of phosphoric acid also includes the claimed phosphate salts and their mixtures with different phosphoric acids. See entire reference especially column 2, line 60 – column 3, line 6.

Hong et al and Larson et al teach that cleaning compositions for copper used in manufacturing of integrated circuit boards conventionally comprised phosphate salts in phosphoric acid.

It would have been obvious to an ordinary artisan at the time the invention was made to employ a conventional mixture of phosphoric acid and claimed phosphate salts in the method of JP 5-148,658 with reasonable expectation of adequate results because the prior art shows that such mixture is also understood as a phosphoric acid and is conventionally used in the cleaning copper in manufacturing of integrated circuit boards.

As to claim 7, it would have been obvious to find an optimum concentration for the components of the solution in the modified method of JP 5-148, 658 by routine experimentation inside of the disclosed by the prior art range because the concentration of the active components is a result effective variable.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-7 and 14-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,156,121. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the patent recite a method comprising application of the same composition to copper surfaces of the circuit board. It is noted that the claims of the patent recite "a proton donor", which is defined by the disclosure as the claimed acids.

Response to Arguments

10. Applicant's arguments filed 11/19/03 have been fully considered but they are not persuasive.

The applicants filed a translation of JP 5-148,658. The applicants argue that this new translation is better than the translation presented in the JPO web site.

It is noted that it is hard to make a conclusion which translation is better because the translation, which is provided by the applicants is not certified and because the provided translation is not complete (the translation does not include the abstract, which is a part of the document and is one of the places where term phosphate is presented).

However, it is believed that both translations support the examiner position.

The applicants argue that the new translation does not use the term "phosphate" and that instead the translation contains a term "phosphoric acid group".

The applicants further argue that "Phosphate is any component having a $-(PO)_4$ configuration, whereas phosphoric acid is also known as H_3PO_4 . The hydrogen radical H_3 in phosphoric acid is highly active and has a tendency to react with other components which is decidedly not desirable in Applicant's reaction".

This is not persuasive because of the following:

First, the term phosphate means A salt or an ester of phosphoric acid.¹

Second, even the new translation of the referenced document (paragraph 0013, page 7 of the new translation) recites salt of the compound comprising phosphoric acid group, i.e. phosphate.

Third, the examiner is not aware of existence of the H_3 radical. The examiner was not able to find any mention of such radical in the literature. The applicants are respectfully requested to cite an authority in support their argument.

¹ *The American Heritage® Dictionary of the English Language, Third Edition* copyright © 1992 by Houghton Mifflin Company. Electronic version licensed from INSO Corporation; further reproduction and distribution restricted in accordance with the Copyright Law of the United States. All rights reserved.

Fourth, the argument that the phosphoric acid is not suitable for the purpose of the invention is persuasive because this acid is a part of the composition, which is utilized by the claimed method. See at least claim 5.

11. Applicant's arguments with respect to claims 3, 4 and 7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Markoff whose telephone number is 571-272-1304. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alexander Markoff
Primary Examiner
Art Unit 1746

am

ALEXANDER MARKOFF
PRIMARY EXAMINER